

Little

ADDRESS

DELIVERED BEFORE THE

WAYNE COUNTY

Agricultural Society

14

OCTOBER 2, 1874,

AT HONESDALE, Pa.

William
BY W. L. HEADLEY,
"

OF NEW YORK CITY.



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*His Excellency
The President—
W S Grant—*

ADDRESS.

MR. PRESIDENT AND CITIZENS OF WAYNE COUNTY :

I come before you to-day at this your annual meeting, by your kind invitation, to address you upon subjects not only pertaining to your business as farmers, but on such, if possible, as may be interesting to you as citizens and as men: and in the multitude of subjects crowding on my mind, I have endeavored to select such as are not worn and hackneyed by constant use; such as have not been dwelt upon so much and so often; such as have not been the theme of the orator so many times that they have become tiresome and distasteful to you. Were I to talk to you of the details of practical farming, of the management or conduct of a dairy, of the rearing of animals, or of anything else which you are every day engaged in doing, your politeness would induce you to listen to me, but you would know nevertheless that you were listening to one who knew less of the subjects he was talking about than you know yourselves.

Yet in a general way these are material matters to consider at such a time as this; but only in a general way. For, to explain these matters in detail, would require much more than the brief space of time to which I can claim your attention, and would subject me to the charge of encroaching upon the peculiar province of the essayist and the bookmaker.

Compliments of

W. L. Headley

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There are things outside of your every-day duties, things important to you as citizens and particularly important to you as fathers of the coming generation for whom you hold this broad country in trust, and with whom you are to leave it when you pass into the world of spirits.

You owe duties not only to yourselves, but to those who are to follow you, and among those duties is that of preserving the purity and productiveness of the land itself, that on which the life of all mankind depends. And the means of doing that, demands, and should command the attention of men everywhere, and at all times.

I need not tell you how much you, more than people of any other trade, profession or occupation, have this great matter in charge.

The surface of the earth is in your keeping, and upon your actions and your treatment of the land you occupy, depends the question whether this country shall increase in productiveness or become a barren desert.

In looking back to times the most remote, and tracing the history of man, and the changes in the soil and climate of the globe through successive generations until now, we learn that in all those parts of the earth where the land is now sterile and unproductive, where cities are in ruins, and the inhabitants ignorant, feeble and impoverished, or lapsing into barbarism; the soil was once fertile and productive, the inhabitants were vigorous and prosperous, and their future looked bright and fair like ours.

For these great changes—these alterations of the earth's surface, and the consequent decay or destruction of the inhabitants themselves, there is a cause about which it is not unprofitable for us to inquire. For it may be, and and in my opinion it is a fact; that the seeds of that same disease are planted here; that in this our favored land, the

same causes which operated to destroy the favored nations of the Old World, that laid the foundations for the ruins of Tyre and Sidon, that dwarfed the cedars of Lebanon, and changed even the surface of the earth itself, are here gradually working the same disastrous results.

What then are those causes, and what more profitable and interesting question can we consider than the things, the habits, and the practices which are productive of such results?

Although there may be, and doubtless are, many causes which have actually contributed to the decay of nations to the impoverishment of the soil and the people, yet among those causes I know of no one so certain in its effects, so fatal in its consequences, as the destruction of forest trees: and because this is so clear to my own mind, I particularly desire to impress my views upon you who listen to me to-day.

While discharging the every day duties of life, and absorbed in the cares, trials and perplexities thereof, we are all too apt to lose sight of the great, broad questions of national interest, political economy, and the public good; or if we make efforts to be public benefactors, we are too apt to gauge our acts by the rule that would make those acts certain to result in the most immediate pecuniary profit. We can easily understand how that man is a public benefactor who makes two blades of grass grow where but one grew before, but we also understand how in that case the most ungenerous man can afford to be a public benefactor, and how actuated by the certainty of immediate profits he may become such benefactor without a thought of the public good. But he who, although one among millions, faithfully does his duty in the preservation, or cultivation if necessary, of a due proportion of forest trees, is doing in that respect, his part in laying the foundation of national greatness, and rendering ser-

vice to coming generations. To the selfish man it may seem to be labor without reward. But the real philanthropist—the man whose feelings of humanity make him more, even than a patriot, the consciousness of having rendered mankind a service is an ample and ever continuing reward.

It may be said by some who have never seriously considered this question, that in this country, which is comparatively new, we have forest trees in abundance, and even in excess of our wants; and such persons may suppose that trees are useful only for timber and for fuel, and that when they cannot be profitably raised for that purpose they should not be allowed to cumber the ground.

It is this error which I fear too extensively prevails that I wish to combat, and which, if possible, I would gladly remove.

Although forest trees are useful for timber and for fuel, yet it is not for those purposes that they are most useful: but as they affect the climate and the land from which the trees have been removed, as they affect the vapors in the air, the rainfalls, the fertility of the soil, and the health and mental vigor of the people are they most useful.

When fresh from the hands of God the world was given to man, it was clothed with a forest growth, and so long as a due proportion of forest trees was left, the land was fertile and productive everywhere. But the avarice and ignorance of man caused him to remove the trees as fast as he could make the cultivated fields more immediately profitable in a pecuniary point of view, and in that way, each man feeling that he could do what he pleased with his own, hills, plains, townships, principalities, and even whole kingdoms were cleared of their forests, or nearly so, and their decay and ruin followed.

Think not that I attach too much importance to this matter. If such disastrous results have followed the destruction of forests, no subject can be more important, or at least more profitable to consider at a time like this.

Do not understand me as expressing the opinion that land should not be cleared of trees or timber, or that forests should remain in their primitive condition everywhere, or that very serious evil has yet been done in this country by the destruction of forests. To leave the land an unbroken wilderness would be to leave it unfit for the habitation of civilized men, and to reduce mankind to a state of barbarism. I believe in the cultivation of as much of the earth's surface as possible, and would preserve a due proportion of forests for the use, preservation and productiveness of the cultivated parts; and to show that it is necessary for that purpose, and for the health and happiness of mankind, will be the burden of my discourse to-day.

Without designating any in particular, I have already alluded to the growth, prosperity and decay of nations in the old world; nor need I name any in particular; for merely speaking of them in general terms will instantly recall to the mind of every one of you the name, history, and geographical location of many such.

In the Sacred Scriptures we have all read of the extraordinary productions of those Eastern lands. We have had described to us a land flowing with milk and honey. We are told of the immense population those lands supported, of the armies that could be raised there, of the villages and cities that were built up and supported from their productiveness, of the prosperity of the inhabitants, of their trade and traffic, and of the commerce on their inland seas.

Now all is changed. The traveler, fresh from the perusal of the glowing descriptions of those nations,

as contained in the ancient records, is so invariably disappointed when he sees them, that all reverence even for their sacred associations is apt to be destroyed. Those hills that were once covered with verdure, and on which the cedar and the palm tree grew, are now mere naked prominences on the earth's surface, or at the most, showing here and there a scraggy bush or shrub. Those plains which in those early days were rich with vegetation, where the vine and the fig tree yielded their fruit, and the soil of which gave back an hundred fold as the reward of cultivation, are now mere arid deserts, dried and parched to sterility by the almost continuous drouths and the heated rays of the sun. The rivers or streams of which mention is made so often in sacred history, have disappeared, or dwindled into streams so small that they cannot now be recognized from any descriptions in the sacred records, and even the famous sea of Gallilee, on which our Saviour sailed in ships, has shrunk into a lake so small and shallow that a ship could not now be used upon its waters.

These being facts, they are the result of a cause. In my opinion the cause, that is, the principal cause, is the destruction of the trees. That the trees were destroyed, that they are gone is certain ; and it is equally certain that after their destruction the rain falls ceased to a great extent, the inhabitants were compelled to resort to artificial irrigation to raise or preserve their crops, and finally became unable from the soil to raise sufficient for the support of the inhabitants ; and the downfall and decay of the nations followed. Moving westward, nation after nation was destroyed by the same means. For evidence of which we need only look to Western Asia and Northern Africa. In other and more intelligent parts of Europe the inhabitants are awakening to the terrible reality, and in some countries, in France in particular, the preservation of trees has become a subject of governmental legislation.

But it may be asked how is it possible for trees to affect the vapors in the air, the formation of clouds, or the fall of rain. Let me say to such, that observation, careful examination, and scientific experiments have shown and established the fact that trees not only do have that effect, but that they have it to an astonishing extent. The quantity of moisture preserved and discharged daily by invisible evaporation by a single tree, is almost marvelous. Scientists and students of nature have made this a subject of careful study and investigation. They have proved that a branch of a tree on which leaves are growing, discharges in twenty-four hours by invisible evaporation, water double its own weight. That has been tested by enclosing the limb in a glass case and hermetically sealing it around the limb, thus gathering and preserving in the vessel the moisture or vapor which would otherwise have escaped into the air. This vapor gathering into little drops and trickling down in the vessel, in the short space of twenty-four hours has been found to be so great in quantity, that as before stated it is double the weight of the limb itself. The same fact has been proved by other experiments. How great then must be the quantity of vapor sent out into the atmosphere every day by a single tree. And if so much is given out by a single tree, what immense quantities are given out by whole forests, and if the destruction of forests stops or prevents the diffusion or discharge of so much moisture into the atmosphere, is it to be wondered at that their destruction should produce drouths or diminish the quantity of rain, or sensibly affect the climate and health of the people? That trees have power to discharge such immense quantities of water we all have other means of knowing. A maple tree will discharge from eight to thirty-two gallons of sap in twenty-four hours, as has been proved by actual experiment; and birch and some other trees will discharge still more. All

this, were the trees untouched by man, would pass out into the open air by invisible evaporation from the leaves; and not only this, but more. Indeed the quantity of moisture drawn by incisions from a tree, would not prevent, or even lessen the breathing action of the leaves, or the discharge of vapor from them.

It may seem to a casual observer that great as the quantity of moisture distributed by the life and action of the trees may be, it cannot be necessary for the formation of clouds, or the production of moisture in the vicinity of large bodies of water, from which vapors arise and clouds are formed. But such is not the fact. On the Islands of Trinidad, Martinique, San Domingo, and most of the West India group, the trees have in late years been cut off to a great extent, and just in the proportion that they have been denuded of trees, have the rain falls ceased, and the deplorable consequences are now being felt in the loss of crops and the increasing unproductiveness of the soil. There is something peculiar—something almost mysterious in the action of forest trees in the production of clouds, and in causing the fall of rains. It is not alone the quantity of vapors distributed by them, but it seems to be the quality or kind of vapor, and it may have a sort of chemical action, of which results only can be known. This we do know, that in the vicinity of lakes, on the shores and islands of the sea, the removal of the forests will make the land a desert; and that in that respect there is no perceptible difference between lands surrounded by water, and lands in the interior of a continent.

I would gladly, if time permitted, direct your attention to the different nations of the world where the disastrous effects of the destruction of forests have most been felt, and so, more clearly prove to you that it would have been for them, and would be now for us, a wise economy to pre-

serve beyond the possibility of loss, a due proportion of all our lands as an unbroken forest—at least one-fifth, if not one-quarter.

For if it is a fact, that in all those parts of the world where the land has been cleared of its trees, the whole of the land has become sterile and unproductive, the inhabitants have become impoverished, and the nations have been destroyed or ruined, there can be no subject more important to you; and that such is the case, is conceded by all persons who have given the subject their attention, and who have examined or inquired into the facts.

Indeed so important do I consider it, that I would, were it in my power, so preserve the forests by legislation or by constitutional provision if necessary.

In ancient times Palestine and other parts Asia and Northern Africa were the granaries of Europe. The land was so fertile and productive that the inhabitants could not afford to leave it, or any considerable part of it, unused merely to allow trees to grow, from which they received no annual profit, and ignorant perhaps of the effect that the destruction of the trees would have on the tillable land, they gradually encroached upon the forests, until in time they were all removed; and alas! the land became desolate. The traveler now passing over these arid plains can hardly realize that they were once covered with farm houses, and orchards, and vineyards, and fields of waving grain; that a happy, prosperous people dwelt there, that the hill sides were clothed with verdure and that streams of water once flowed through the valleys. Now all is desolation. The farm houses and the vineyards are gone, the cities are in ruins, and all material evidences of trade, business and prosperity have disappeared.

The few human beings who wander over the plains are found by the traveler to be but one remove from

savages, and act no useful part in life. The streams are dried, and the hills are naked in the sun.

These are wonderful changes, and when we reflect that they have all been caused by the destruction of the trees, how serious does the consideration of that one question become. How suggestive it is to us. But it may be said that I am assuming too much, in assuming that all this change, this ruin, and this destruction, has been caused by the mere destruction of the trees. Allow me to say that in entertaining this view I do not stand alone.

It is assumed and asserted, and as I think logically proved by writers who have given the subject their most careful attention. Without wearying you with references, allow me to cite the words of one of our most learned writers upon the subject. George P. Marsh in his valuable work entitled "Man and Nature" at page 189, in speaking of Palestine and other parts of Asia and Northern Africa, and of their fertility and prosperity in ancient times, says: "These lands are now deserts, and it is the "destruction of the forests alone which has produced this "desolation."

I might multiply authorities upon that question, but they are not needed. Whoever will examine the question will be convinced without the aid of the opinions of others.

In France the population has long been dense and nothing but governmental restraint has prevented the shortsighted inhabitants from destroying the productiveness of the soil by destroying the trees. As it is, in many parts the damage has been terrible. In the department of Ardeche nearly all the woodland was cut off about thirty years ago; and which was followed by great changes in the climate. The rain falls have diminished, and the late frosts in the spring, which were before unknown, have injured and destroyed the vegetation to an alarming extent.

It is known there now that nothing but a restoration of the trees can restore the former state of things. Similar evil results have followed the destruction of trees on the plains of Alsace.

Since the cutting off of the woods of the Appenines the cold winds shrink and destroy vegetation, spring is much later than formerly, and the Mulberry trees on which the prosperity of the people depended, are destroyed, except in those parts where the woodland is left.

There are additional evils which result from the destruction of the woodland. It is not alone to save the land from drouths or want of moisture that the trees are useful or absolutely necessary; but to save the land from frosts in spring, and from the devastating force of winds they are also useful agents. And when I say that to save the land from the devastating force of winds they are useful, I do not wish to be understood as meaning that they save the land by merely breaking the force of the winds. I go farther than that, and say that they not only break the force of the storms but they prevent severe winds and tornadoes; or in other words the destruction of forests is followed invariably by severe ærial disturbances and the denuded district is then visited by violent winds such as were never known before. Innumerable proofs of this fact might be cited.

Allow me to refer you to one case which is a matter of history. The terrible North-West wind called a *mistral*, which rendered Cervennes in France almost unfit for habitation, was entirely unknown before the destruction of the woodland which was all destroyed at one time in a mass by order of the Emperor Augustus. That destruction was immediately followed by the Mistral, which swept the land and kept it stripped and bare thereafter. The superstitious inhabitants regarded it as a curse sent from God, and raised altars and offered sacrifices to appease its

rage. Their plan however was a failure. Nothing but a restoration of the woodland could cure the evil.

I have given you so far at least two reasons why the forests should be preserved, and why upon that subject we should be careful to make no mistake. But those are not all. The forest trees act other important parts in the economy of nature. Useful, indeed necessary, as they are for the purposes named, useful as they are for lumber and fuel, in many, many other quiet ways they are daily serving man. The chemical effect of the trees on the atmosphere, by absorbing the carbon exhaled by animals, and developed by animal and vegetable decomposition, and by exhaling oxygen in return is not only wonderful, but to it we owe our health and even life itself. Within the tree is a laboratory, the secrets of which no man can ever learn, where silently and noiselessly a work is being constantly done, the benefits of which mankind enjoy without money and without price. Do we sufficiently appreciate it? Do we reflect that without this chemical action—that but for the preservation of the purity of the atmosphere by the working of this silent machinery, operated by forces mysterious and powerful beyond the comprehension of man, all mankind would die? all animal life would cease upon the earth? Yet such is the case. But as it is furnished to us free by the giver of all good, and operated without our labor or our care, we fail to concern ourselves about its uses or its benefits, and enjoy it without thanks, as we do the many other bounties of nature.

I have talked to you already of the terrible penalty that the inhabitants of other nations have paid for their disregard of the great blessings shown them, and their rejection of such priceless gifts. Let us have a care that we do not follow in their footsteps, that we do not imitate their folly.

While considering this question of the beneficial effect of trees in preserving the humidity of the atmosphere, and in promoting rainfalls, I have spoken more particularly of results, the want of time rendering it impossible for me to trace back those causes to their effects. But there is one fact before stated, sufficiently important to warrant a further explanation. I have stated to you that lands bordering on the sea, or other great bodies of water, even islands, become subject to drouths, and become sterile and desolate for that reason, if the trees are removed, notwithstanding there is water without limit near them, and fogs and vapors arise all around them. And to prove that fact I referred to islands in the West India group where such results have followed the destruction of the trees. One explanation not before given is that trees are conductors of electricity, and seize upon and conduct to the earth electricity, and also the vapors passing along. In this way the moisture in fogs and clouds, whether arising from the sea or the land, is not only seized and detained, but this electrical action of the trees has in some mysterious way, which science has never been able to explain, an effect upon the clouds in condensing the vapors and conducting them to the earth in the form of rain.

Another effect which woodland has, is to prevent hail storms, water spouts, and other atmospherical disturbances; or more properly speaking, the destruction of the woodland causes, or is followed by such storms and commotions.

These are ascertained to be electrical disturbances; and when we know how important a part the trees perform in equalizing the electricity of the earth and the air, we can easily understand how certain and natural it is, that these commotions in the atmosphere should follow their removal or destruction.

Trees, too, as we all know, are conductors of heat, con-

ducting heat to the earth when the earth is coldest, and to the air when the air is coldest, thus equalizing the temperature of the earth and air, and partially explaining why it is that the removal of the trees is followed by the extension of winter into spring, and spring into summer, making those seasons late, and causing the late frosts so injurious to grain and fruit.

By way of illustration, I have referred more particularly to the effect of the destruction of forests in other countries. But because I have spoken only of such lands by name, I would not have you infer that I think no mischief has been done in this country. As I have stated before, I think no very serious evil has yet been done in this country by the destruction of forests, that is; as compared with the evil done in other lands. But great damage has already been done, and greater still will follow, unless the people or the government shall act promptly in checking the havoc that is fast being made.

Indeed the danger is now greater here than it ever appeared to be at any one time in any other nation upon the earth. We, Americans, are a progressive people, and in making the progress which we are making, and of which we boast, we are a destructive people. As the hunter on the prairie will destroy hundreds of buffalo in mere wantonness, so will the pioneer or the lumberman sweep away acre after acre of woodland, with no concern for the future, or thought upon the subject, except as to how far it will promote his convenience, or result in his immediate profit, however small. And farmers, finding tillable land more profitable than woodland, hesitate not to destroy the woodland by burning or otherwise, thinking nothing of the future, or caring less; and thus our country is fast becoming denuded of its forests, and in a fair way to become like the ruined kingdoms of the old world, a land of naked hills and barren plains.

Already the effects of such short-sightedness and folly are manifest in many parts, in the disturbances in the atmosphere, in the long continued drouths, in the impoverishment of the soil, and in the shrinking of the streams. And good men, lovers of their country, laboring with little effect to prevent the ruin that they see so strong a prospect of in the future, look sadly on, hoping still that the evil may yet be seen and understood, and checked before it is too late.

The recognition of this fact, and this feeling of sorrow and regret, is beautifully expressed by one of our modern poets in language like this :

“Before these fields were shorn and tilled,
 Full to the brim our rivers flowed,
 The melody of waters filled
 The free and boundless wood.
 And torrents dashed, and rivulets played,
 And fountains spouted in the shade.

These grateful sounds are heard no more,
 The streams are silent in the sun,
 The rivers by the blackening shore
 With lessening current run.
 The realms our tribes were crushed to get,
 May be a barren desert yet.”

Inasmuch as with our progressive spirit we are moving on with greater rapidity than did ever nations in the olden time, and as here, with us, change follows change in such rapid succession, ages will not be required, nor will many generations, to bring about these changes so much to be feared and deplored, unless a remedy is applied, and applied early. And it is for this reason that I felt when I received your kind invitation to come here to this country of my nativity, this home of my childhood, to address those whom I am anxious to call my friends, that I could

do no better service than to talk to you mainly upon this subject; one that is really more important to you, and to the country at large, than any other matter or thing that I could make the subject of my discourse. And feeling intensely upon the subject myself, I shall be content if I can make impression enough upon my hearers to induce any of them to make this matter a subject of reflection and inquiry. And now before leaving it I wish further to add, that in those parts of the world where the inhabitants for the purpose of repairing the damage caused by the destruction of the woodland, or for other reasons, have replanted or cultivated trees, and so restored the forests; the long continued drouths have ceased, rain storms have followed, and the water has commenced and continued to flow over the beds of streams that have long been dry, the surrounding lands have again become fertile, the atmosphere pure, and the inhabitants healthful.

For proof of this I might refer you to parts of Belguim, to the vicinity of Antwerp, and to the Plateau of La Hague, where merely planting and cultivating rows of trees have changed the climate, tempered the winds, and made fertile the land.

Also to the Island of St. Helena where the extension of the wooded surface within a few years has increased the rain fall to such an extent, that the average fall of water is twice that of former years.

Also to Egypt, where through the enterprising spirit of a modern ruler, plantations have been started and cultivated by artificial irrigation, so that now full-grown trees cover the once barren wastes, and the rains have become frequent where they were scarcely ever known before.

I might also refer you to the results of such experiments in Scotland, and in parts of Northern France, and to the vicinity of Salt Lake in this country. But on this

subject I have said enough, what I wish more particularly than all else, is to interest you in the subject of the *preservation* of the trees. Once destroyed, no argument is necessary to show the irreparable injury caused by their destruction. The trouble is that man's life is short, and we appreciate that fact too much, as it seems to me. Man is too apt to live only for the present, on the principle of "after me the deluge"—and the world and its condition after he shall have passed away, does not sufficiently concern him. Yet here in this country as great sacrifices have been voluntarily made by our forefathers for us, as were ever voluntarily made by any people; and so, we owe a corresponding debt and duty to the generations that are to follow us. Ungrateful should we be—unworthy should we be, of the blessings of freedom and prosperity which we now enjoy, should we fail to preserve and hand down to the coming generations this fair heritage of ours uninjured, and unimpaired.

And now my friends I must leave this subject of forest trees; but I leave it with regret, indulging in the hope, however, that what I have said may be productive of some good. We know how great results will flow sometimes from trifling causes, and we all know that now in these modern days, farmers in their thoughts, studies, and acts, are not so confined and contracted as were the tillers of the soil in ancient times. We have evidence of this in the vast improvements which we see everywhere around us.

Fifty years ago, deep buried in the bosom of the wilderness, the lonely pioneers of this county beat back, with axe and fire, the "empire of shade and savagism" from their log-cabins, and now where their solitary habitations once stood, we behold the farmhouse, the factory and the stately mansion.

Where the tall forest trees through this valley lifted

their awful forms in countless numbers far and near in the grandeur of their solitude, to-day the church spires of Honesdale reflect the autumnal sun beams, and cast their shadows over a growing and prosperous city. All these give evidences of the glorious changes that man's industry hath wrought for our good; and should be to you and me an example which it should be our love and duty to emulate. May we be half as deserving of the admiration of those who may occupy the earth after us, as they who made this land what it is; some of whom rest from their labors in the bosom of the soil that they cultivated, and some of whom are with us to-day, whose silver locks, like Cicero's, have deservedly "purchased them mens' good opinions." God bless the evening of their days.

Many of you who hear me now can doubtless remember the time when these hills and valleys were an almost unbroken wilderness—when the wolf's long howl woke the forest echoes, and the wild deer and the bear yet disputed man's possessions. It is within the lifetime of many now living, when farming was carried on in the territory now comprising this county, without the aid of any of the inventions or improvements which we now see all around us; when without roads or bridges the inhabitants were comparatively secluded from the rest of the world; and when without any but the rudest agricultural implements, the cultivation of the land was carried on.

A few years have passed away, and behold the change! Language is inadequate to express it. A few hours ago and I, who now address you was hundreds of miles away. With a rapidity which in those early days was never even prophesied, we are whirled past cities and villages, over rivers, and through fields and groves, crossing townships and counties, and even states in a single

day; and everywhere we see as I see around me here; evidences of wealth and refinement, of progress and improvement. The land which was formerly of little worth is now of great value—lands once sold at fifty cents an acre, are now worth as many dollars. Your fields are in a high state of cultivation. Beautiful farm houses and orchards dot your plains, and the streams that flow through your valleys are not allowed to run unwasted to the sea. These changes have all been wrought in these few years, and all by the intelligence, the industry, and the liberality of the farmers. Of this there is no better evidence than the organization and existence of this association, this county society. By thus organizing yourselves into an association you contribute to each other your thoughts, ideas, and inventions. You give the results of experiments, and you properly act on the principle that your “light is none the less for lighting your neighbors.” This is the kind of liberality by which both the giver and the receiver are benefitted, and this it is, that has caused, the careful study, the experiments, and friendly rivalry which is productive of so much good.

We see this in the improved condition of the horses, the cattle and other animals which have been brought to this your annual gathering. We see it in the fruits and vegetables brought here for exhibition.

The producer of these, shows what he has done, and he tells how it is done, and he says to his neighbor “go thou and do likewise.” With this state of feeling existing among farmers, followed as it is by a willingness of individuals to act as occasion may require, for the general good, knowledge and prosperity are inevitable. And I am not surprised at the evidences of the prosperity and success of the farmers of this section of the state.

Another beneficial effect of your enterprising spirit and of the formation of associations like this, is the stimulation of

the inventive spirit and genius of the country. The result of which we see in the multitude of labor saving instruments and implements gathered here upon these grounds; for it is to you quite as much as the inventors to whom we are indebted for the inventions made. The sub-soil plow, the threshing machine, the mowing machine and reaper, and the many other inventions and improvements are invented and produced only in obedience to your call, or I should say your demand.

The inventive genius which produces and provides these things, would slumber on forever were the farmers too indolent to use them, or too ignorant to appreciate their worth. I state to you nothing new when I say, that the records of the patent office at Washington will show, that in those parts of the country where agriculture is in its rudest state, and where the land is poorly tilled, there are no inventors, or scarcely any. The reason is that there is nothing there to stimulate or call out the inventive genius of the people. It is to you and farmers of other sections, who are willing and desirous to adopt and profit by any real improvements made, and who are capable of judging of the merits of the inventions, that we are indebted for all such progress.

Looking back through the last century, we find man has been elevated from the slave of Nature's elements to the position of their master. Instead of living in constant dread of them, he renders them, even in their wildest eccentricities, subservient to his use and profit. Science has taught him that while he uses the flowings of her waters at home for productive purposes, their transformation into steam, has become the power by which he is propelled, as with the speed of wind, over land and sea.

Man, with the lasso of science has caught the vivid lightning from the surcharged atmosphere, and tamed it down to become the swift post-horse of his words, and the

trumpet through which nation speaks to nation upon themes of commerce and fraternal affection, as rapidly as thought follows thought.

If I mistake not, man is only in the early dawn of his intellectual greatness. That immortal command must yet be obeyed, "First know thyself, enough for man to know." His inquisitiveness and ambition impel him onward and upward, while science unveils to him at every step, some hidden mystery; some new developement of creative power. Who shall say, that within the next half century some Newton, some Franklin, or some Field, shall not pin his name to the escutcheon of his century, by yoking the electric fluid to the ærial car, to be at man's command and use, like the sea-vessel of to-day, in the hands of the trusty mariner.

Man's progressive nature is evinced and measured by the growth of agriculture. But time admonishes me that I must leave this subject also.

Gladly would I extend my remarks, by imparting to you my views in regard to the composition, exhaustion, and improvement of soils, the rotation of crops, the cultivation of fruit, and such other agricultural subjects as I have acquired a knowledge of, and as to which I have well defined convictions. But with all your study and experience on those subjects, I will not flatter myself that I could increase your knowledge or change your convictions should I differ with you.

More pleasing to you now, more eloquent than any words of mine, are the sights and sounds of nature all around us. I feel that influence myself, and I yield to it with pleasure.

In closing, I will say to the farmers of Wayne County, that agriculture should not be made a repulsive pursuit to your children;—when I say this, I include your daughters

also, for I think they should be admitted to equal rights in this country.

Grudge not your sons, that which will make them truly wise.

Educate your children as highly as you can afford;—a good education is far better for them than untold wealth with an empty brain.

Give them their legacies while you live, by enriching their minds, and you endow them with that, which cannot be taken from them after your death.

Irradiate the homestead with volumes of living, practical thoughts, and noble sentiments; and it will become endeared to your children.

Adorn the farmhouse with grand instructors of every character, and your children will become readers and thinkers.

When investing your earnings, remember the claims of art and literature.

The ordinary farmer of to-day, can have a better library than William the Conqueror could have acquired in his time.

Make home pleasant to the hearts and understandings of your sons, and instead of leaving the plow for more exciting,—though less noble—pursuits, they will rise to an intelligent appreciation of their calling.

With these opportunities, the minds of your children will evolve original thoughts and noble ideas; and they will learn the appropriate language of expression.

As the plow often reveals the hidden treasures of buried nations, so may the plowman discover new and important facts, that will aid the progress of science.

The farmer's life is a noble one:—more men have been

taken from the field to become rulers of people than from any other vocation.

The plow is the true emblem of industry :—of it

* * * “ the rural Maro sung,
To wide imperial Rome, in the full height
Of elegance and taste, by Greece refined.
In ancient times, the sacred plow employ’d
The kings and awful fathers of mankind;
And some, with whom compared your insect tribes
Are but the beings of a summer’s day,
Have held the scale of empire, ruled the storm
Of mighty war ; then, with victorious hand,
Disdaining glories of the crown, seized
The plow, and, greatly independent, scorn’d
All the vile stores corruption can bestow.

Ye generous Yeomen, venerate the plow;
For o’er your hills and long-withdrawing vales
Autumn has spread her treasures to the sun,
Luxuriant and unbounded ! As the sea,
Far through his azure turbulent domain,
Your empire owns, and, from a thousand shores,
Wafts all the pomp of life into your ports;
So with superior boon may your rich soil,
Exuberant, Nature’s better blessings pour
O’er every land, the naked nations clothe,
And be the exhaustless granary of the world ! ”

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